

APPENDIX F
TESTS FOR NON-STORM WATER DISCHARGES

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DYE TESTING

Dye testing can be used to establish positively if certain facilities or fixtures are connected to a storm water collection system. The dye is simply introduced into the suspected waste stream, and storm water outfalls are examined for detections of the dye. Specially manufactured dyes are available for this type of testing. Check with your local sewer authority before conducting this test—dyes can be toxic and thus harmful to the municipal sewage treatment plant

Equipment

Two types of safe and harmless but effective dyes are available for dye testing. Powder in cans or containers is measured by a spoon or small dipper. Tablets of the dye are slower to dissolve than the powder form, but are less messy and are sometimes more desirable than the powder for this reason. The dye is the only piece of equipment needed. Regardless of the type of dye, dissolve it in the flow. A tablet may sink into a sump or wet well and not circulate with the usual flow.

CAUTION: Some dyes may leave a stain if spilled. These stains can be very difficult to remove.

Contact the water pollution control agency to determine if there are any regulations regarding the use of dyes.

Operation

While one operator applies the dye to the suspected location, another operator maintains a watch at the next downstream manhole from the location.

- Where a plumbing fixture is used, such as a water closet bowl or basin, the water is turned on and the dye powder or tablet is dropped directly into the drain.
- Where there is no immediate supply of water, such as a roof gutter or storm drain in dry weather, pouring a bucket of water with the dye powder is suggested. The amount of water and dye needed depends on the distance to the next manhole and the existing flow.
- Based on the assumed velocity of flow, an estimate may be made of the expected flow time to the downstream manhole. Allow plenty of time because the dye often takes much longer than expected.
- Use of powdered dye can be difficult and messy on a windy day. When the wind blows, either pre-mix the dye in water or enclose a quantity of the powder dye in either tissue or toilet paper. Wind can scatter a powdered dye, the dye is impossible to collect. The dye may land on the property of nearby residents and businesses, and when wet, cause stains on buildings, autos, clothes, and landscaping.
- When a number of dye tests are to be conducted on the same line or section of a sewer system, the dye testing should start at the facility farthest downstream and progressively work upstream for the other dye tests. Otherwise, if you dye the facilities upstream first, the flow is then contaminated with dye, and you then must wait several hours or until the next day to conduct additional tests.
- When tests are completed, record whether or not the service is connected to the sewer.

